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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,209	08/22/2001	Paul Dormitzer	100.232US01	8733
27073	7590	10/10/2003	EXAMINER	
LEFFERT JAY & POLGLAZE, P.A. P.O. BOX 581009 MINNEAPOLIS, MN 55458-1009			NGUYEN, HAI L	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 10/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

RR

Office Action Summary

Application No.

09/935,209

Applicant(s)

DORMITZER ET AL.

Examiner

Hai L. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10, 12-15, 17-19, 21, 22, 24-27 and 29-32 is/are rejected.
- 7) ☒ Claim(s) 5, 11, 16, 20, 23, 28 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the recited limitation “a multiplexer coupled to receive first and second data signals and the control signal, the multiplexer selectively outputting either the first data signal or the second data signal based on the control signal such that the data signal passed by the multiplexer is in phase with the sample clock signal; and a data channel coupled to receive the first clock signal and the control signal and to pass data in phase with the sample clock using the first clock signal based on the control signal” in claim 32 is not supported either by the disclosure or the drawings. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 32 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In claim 32, the recited limitation on the last 7 lines is not understood as to how a circuit can perform all of claimed functions such as “the multiplexer selectively outputting either the first data signal or the second data signal based on the control signal such that the data signal passed

by the multiplexer is in phase with the sample clock signal; and the data channel coupled to receive the first clock signal and the control signal and to pass data in phase with the sample clock using the first clock signal based on the control signal” is achieved. Since, the specification does not contain a full detail of description that shows how the circuit performs all those claimed functions.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 7, 12, 17, 30, and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishimura (US 5,990,715).

With regard to claim 1, Nishimura discloses in Fig.2 an inherent clock compensation circuit, comprising a clock synchronization circuit coupled to receive an input clock signal (1), wherein the clock synchronization circuit generates a master clock signal (S1) and produces a plurality of internal logic clock signals (S2, S3); a phase comparator (31) coupled to receive one (S3) of the plurality of internal logic clock signals and a sample clock (S0) from an associated receiver, wherein the phase comparator generates a control signal based on a phase comparison between the sample clock and the one of the plurality of internal logic clock signals; and a down converter channel (32, 33, 34, 41, 51) coupled to receive each of the plurality of internal logic

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clock signals and the control signal and to pass data in phase with the sample clock using the one of the plurality of internal logic clock signals based on the control signal.

Claims 7, 30, and 31 are similarly rejected. Note the above discussion with regard to claim 1.

With regard to claim 12, Nishimura discloses in Fig.2 an inherent clock compensation circuit, comprising an input (1) for receiving an input clock signal; a clock synchronization circuit (21, 30) coupled to receive the input clock signal, wherein the clock synchronization circuit generates a master clock signal and produces a plurality of internal logic clock signals; a tapped delay line (34) coupled to receive a first one of the plurality of internal logic clock signals and to generate a clock signal with a selected delay as an output clock signal; a phase comparator (31) coupled to receive a second one of the plurality of internal logic clock signals and a sample clock (S0) from an associated receiver and to generate a control signal based on a phase comparison of the second one of the plurality of internal logic clock signals and the sample clock; and a down converter channel (32, 33, 41, 51) coupled to receive the plurality of internal logic clock signals and the control signal and to pass data in phase with the sample clock using the second one of the plurality of internal logic clock signals based on the control signal.

Claim 17 is similarly rejected. Note the above discussion with regard to claim 12.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 21, 24, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura.

With regard to claims 21 and 27, the above discussed circuit of Nishimura meets all of the claimed limitations except that Nishimura discloses only one set of circuit instead of a plurality of circuits as called for in claim 21. It would have been obvious to one of ordinary skill in the art to duplicate the clock compensation circuit taught by Nishimura for providing a synchronous system that is required more than one circuit module.

Claim 24 is similar rejected. Note the above discussion with regard to claim 12.

8. Claims 2-4, 6, 8-10, 13-15, 18, 19, 22, 25, 26, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimura in view of Riordan et al. (US 5,317,601).

With regard to claim 2, the above discussed circuit of Nishimura meets all of the claimed limitations except for the limitation that the clock synchronization circuit comprises a phase-locked loop (103 in instant Fig.1) coupled to receive the input clock signal and to generate the master clock signal; and a clock divider (104) coupled to receive the master clock signal and to produce the plurality of internal logic clock signals. Riordan et al. teaches in Fig.2 a circuit having a circuit having a phase-locked loop (40) coupled to receive the input clock signal and to generate the master clock signal; and a clock divider (45) coupled to receive the master clock signal and to produce the plurality of internal logic clock signals as recited in the claim.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to utilize the circuit taught by Riordan et al. with the prior art (Fig.2 of Nishimura) for the advantage of providing a number of precisely synchronized clock signals.

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With regard to claim 3, inherently one of plurality of internal logic clock signals is matched in frequency to the sample clock.

With regard to claim 4, the references meet all of the claimed limitations except for the limitation that the synchronization circuit receives an input clock signal on the order of 100 MHz and produces internal logic clock signals on the order of 20 MHz, 40 MHz, and 100 MHz. It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to operate the synchronization circuit with certain frequencies for meeting specific condition which is in each case optimally matched to its application.

Claims 6, 25, and 26 are rejected for similar motivation. Note the above discussion with regard to claims 1 and 4.

Claims 8-10, 13-15, 18, 19, 22, and 29 are similarly rejected. Note the above discussion with regard to claims 2-4.

Allowable Subject Matter

9. Claims 5, 11, 16, 20, 23, and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record does not disclose or suggest a clock compensation circuit (102 in instant Fig.1), and a method of use thereof, comprising: a clock synchronization circuit (110); a phase comparator (120s); and specifically the limitation directed to a down converter channel coupled to receive each of the plurality of internal logic clock signals and the control signal and to pass data in phase with the sample clock using the one of the plurality of internal logic clock

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signals based on the control signal, wherein the down converter channel comprises a first flip flop circuit (130) coupled to receive the one of the plurality of internal logic clock signals (105) and to pass a first data signal with a first phase; a second flip flop circuit (132) coupled to receive the one of the plurality of internal logic clock signals and to pass a second data signal 180 degrees out of phase with the data signal output by the first flip flop; and a multiplexer (134) coupled to receive the first and second data signals and the control signal, the multiplexer selectively outputting either the first data signal or the second data signal based on the control signal such that the data signal passed by the multiplexer is in phase with the sample clock signal (PHYRET).

Conclusion

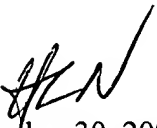
10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shieh et al. (US 6,323,705) is cited as of interest because it discloses a double cycle lock approach in delay lock loop circuit.

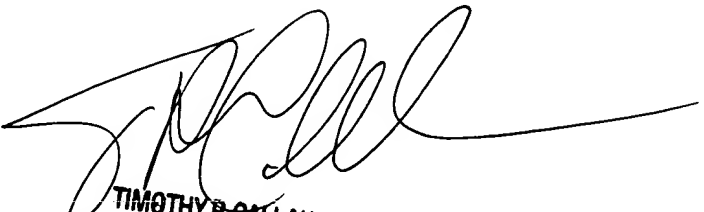
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai L. Nguyen whose telephone number is 703-306-9178 and Right Fax number is 703-746-3951. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 703-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

HLN 
September 30, 2003


TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800